



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/711,513	09/23/2004	Chi-Chan Chiang	CHEP0039USA	5512
27765	7590	05/12/2006	EXAMINER	
NORTH AMERICA INTELLECTUAL PROPERTY CORPORATION P.O. BOX 506 MERRIFIELD, VA 22116			COLILLA, DANIEL JAMES	
			ART UNIT	PAPER NUMBER
			2854	

DATE MAILED: 05/12/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

10

<b>Office Action Summary</b>	<b>Application No.</b> 10/711,513	<b>Applicant(s)</b> CHIANG, CHI-CHAN	
	<b>Examiner</b> Daniel J. Colilla	<b>Art Unit</b> 2854	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 23 September 2004 and 07 April 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4 and 6-9 is/are rejected.
- 7) ☒ Claim(s) 5 and 10 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 September 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. _____  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>4/7/06</u> .  | 6) <input type="checkbox"/> Other: _____                                    |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sumi *et al.* (JP 2003-063684) in view of Eshita (JP 3-112697).

With respect to claim 1, Sumi *et al.* discloses the claimed printer except for the pinch roller driving device. Sumi *et al.* discloses a printer including a capstan roller 22a and a pinch roller 22b as shown in Figures 4(a) and 4(b) of Sumi *et al.* A bushing 32a is installed around the pinch roller, wherein the outer radius of the bushing 32a is greater than the radius of the pinch roller 22b so that there is a gap between the capstan roller 22a and the pinch roller 22b as shown in Figure 4(a). Eshita teaches a pinch roller 44 driving device (see Figure 2 of Eshita) for pressing the pinch roller onto the print medium or separating the pinch roller from the print medium. It would have been obvious to combine the teaching of Eshita with the printer disclosed by Sumi *et al.* for the advantage of optimally setting the pinch roller position for whatever type of paper is being printed. Note, since applicant has not tied the preamble of the claim into the body of the claim, the “thermal printer” recited in the preamble has been given no patentable weight.

With respect to claim 4, Sumi *et al.* teaches that the inner edges of the bushing 32a are positioned outside the outer edges of the print medium F as shown in Figure 4(b) of Sumi *et al.*

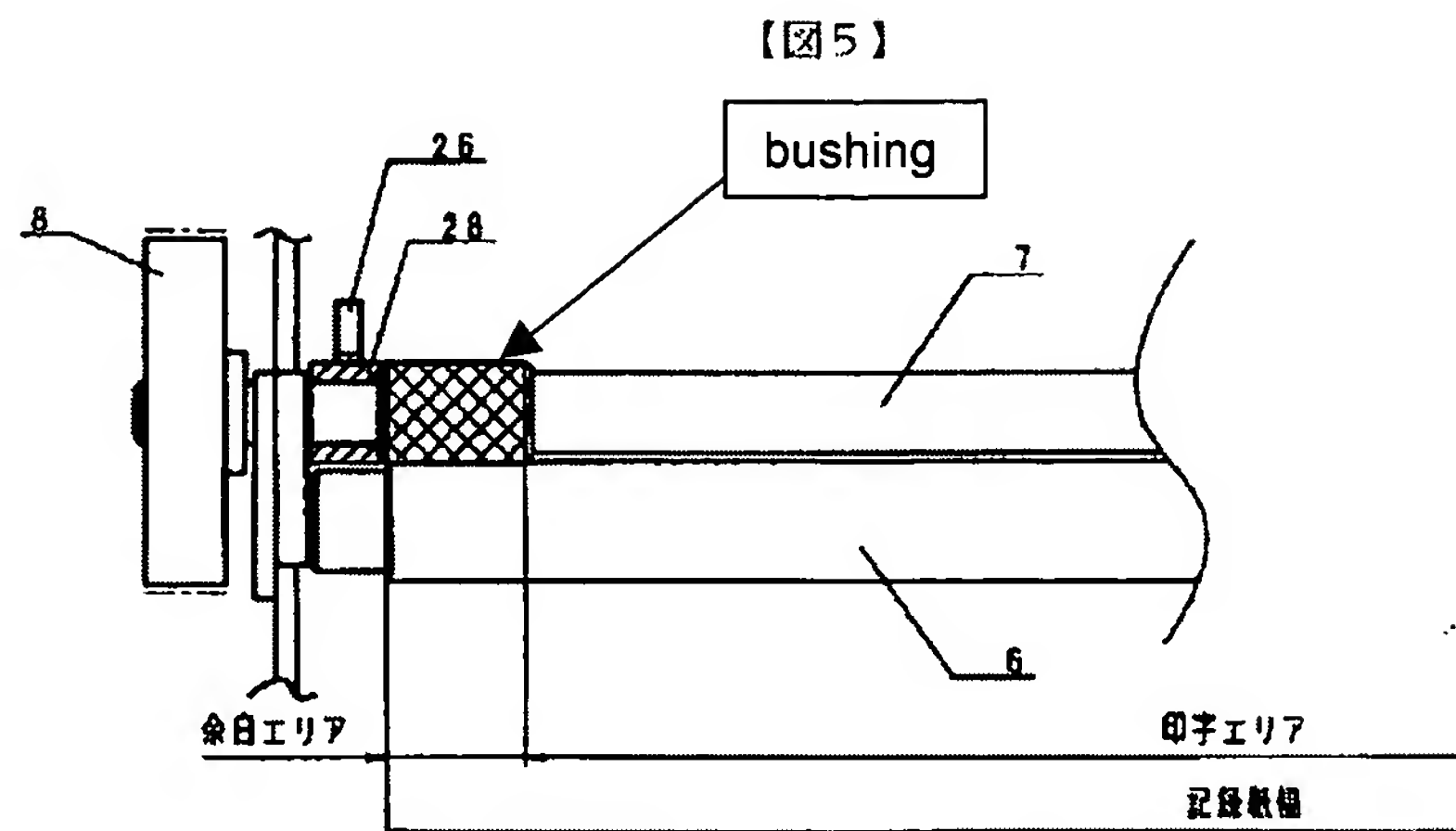
Art Unit: 2854

3. Claims 2-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sumi *et al.* (JP 2003-063684) in view of Eshita (JP 3-112697) as applied to claim 1 above, and further in view of Hatakeyama *et al.* (US 6,287,033).

With respect to claims 2-3, Sumi *et al.* in view of Eshita discloses the claimed printer except for the prickers on the capstan roller and that it is not known to the examiner if the bushing is sheathed on the pinch roller. However, Hatakeyama *et al.* teaches bushings 2a that are sheathed on pinch roller 2 as shown in Figure 1 of Hatakeyama *et al.*, and a capstan roller 1 with prickers 3 (Hatakeyama *et al.*, col. 4, lines 33-34). It would have been obvious to combine the teaching of Hatakeyama *et al.* with the printer disclosed by Sumi *et al.* in view of Eshita for the advantage of the prickers 3 on the capstan roller 1 which allow a surer grip on the media being printed.

4. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kanbe *et al.* (JP 2000-203068) in view of Eshita (JP 3-112697).

With respect to claim 6, Kanbe *et al.* discloses the claimed thermal printer except for the pinch roller driving device. Kanbe *et al.* discloses a capstan roller 7 and a pinch roller for pressing a print medium 4 to the capstan roller 7. As shown below, in the Figure taken from Figure 5 of Kanbe *et al.*, Kanbe *et al.* discloses a bushing installed around the capstan roller:



The outer radius of the bushing is greater than the radius of the capstan roller 7 so that there is a gap between the capstan roller 7 and the pinch roller 6 as shown above. Eshita teaches a pinch roller 44 driving device (see Figure 2 of Eshita) for pressing the pinch roller onto the print medium or separating the pinch roller from the print medium. It would have been obvious to combine the teaching of Eshita with the thermal printer disclosed by Kanbe *et al.* for the advantage of optimally setting the pinch roller position for whatever type of paper is being printed.

5. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kanbe *et al.* (JP 2000-203068) in view of Eshita (JP 3-112697), as applied to claim 6 above, and further in view of Nishimura (JP 2001-232876).

Kanbe *et al.* in view of Eshita discloses the claimed thermal printer except for the plurality of prickers positioned on the surface of the capstan roller for pricking the print medium. However, Nishimura teaches a capstan roller 41 in a thermal printer that includes sections 52 with prickers as shown in Figures 3(A) and 3(B) of Nishimura. It would have been obvious to

Art Unit: 2854

combine the teaching of Nishimura with the thermal printer disclosed by Kanbe *et al.* in view of Eshita for the advantage of providing a surer feeding grip on the print medium.

6. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kanbe *et al.* (JP 2000-203068) in view of Eshita (JP 3-112697), as applied to claim 6 above, and further in view of Kang (US 5,718,522).

Kanbe *et al.* in view of Eshita discloses the claimed thermal printer except that it is not known to the examiner how the bushings are mounted on the capstan roller 41. However, Kang teaches a bushing 72 sheathed on a capstan roller 50 as shown in Figure 9 of Kang. It would have been obvious to combine the teaching of Kang with the thermal printer disclosed by Kanbe *et al.* in view of Eshita for the advantage of the ease for mounting the bushing.

7. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kanbe *et al.* (JP 2000-203068) in view of Eshita (JP 3-112697), as applied to claim 6 above, and further in view of Sumi *et al.* (JP 2003-063684).

Kanbe *et al.* in view of Eshita discloses the claimed thermal printer except for the inner edges of the bushing being positioned outside the outer edges of the print medium. This limitation is dependent on the width of the printing medium. It is known to print on many different widths of printing medium. For example Sumi *et al.* teaches printing on a printing medium F in which the inner edges are located within the inner edges of bushings 32a as shown in Figure 4(b) of Sumi *et al.* It would have been obvious to combine the teaching of Sumi *et al.*

Art Unit: 2854

with the thermal printer disclosed by Kanbe *et al.* in view of Eshita for the advantage of printing on different thicknesses of paper as is shown in Figure 4(b) of Sumi *et al.*

***Allowable Subject Matter***

8. Claims 5 and 10 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

9. The following is a statement of reasons for the indication of allowable subject matter:

Claims 5 and 10 have been indicated as containing allowable subject matter primarily for the drag link connected to the lever and the cam for transferring a travel of the cam to a travel of the lever.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel J. Colilla whose telephone number is 571-272-2157. The examiner can normally be reached on M-F 7:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Hirshfeld can be reached on 571-272-2168. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

May 9, 2006



Daniel J. Colilla  
Primary Examiner  
Art Unit 2854